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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,912	11/04/2003	Takashi Kobayashi	Q78267	4390

23373 7590 06/29/2005

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EXAMINER

LIANG, LEONARD S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/699,912

Applicant(s)

KOBAYASHI ET AL.

Examiner

Leonard S. Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/04/03, 02/02/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification and Drawings***

The lengthy specification and drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification and drawings.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Koike et al (US PgPub 20030104175 A1)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Koike et al discloses:

- {claim 1} An ink-jet recording sheet comprising a support and a colorant receiving layer disposed on the surface of the support (abstract), wherein the colorant receiving layer is a layer obtained by cross-linking and hardening a coated layer obtained by coating a coating solution including inorganic fine particles, a water-soluble resin and a boron compound (paragraph 0036); wherein the cross-linking and hardening is performed by applying a solution including a metal compound and having a pH of 8 or higher to the coated layer or a coated film at a time during drying of the coated layer formed by coating the coating solution and before the coated layer shows a falling rate of drying (abstract)
- {claims 2 and 5} wherein the metal compound is a zirconium compound (paragraph 0086)
- {claims 3 and 6} wherein the inorganic fine particles are gas phase method silica having an average primary particle diameter of 20nm or smaller and the water-soluble resin is a polyvinyl alcohol (paragraph 0052, 0059)
- {claim 4} A method for preparing an ink-jet recording sheet including a support and a colorant receiving layer disposed on the surface of the support, the method comprises: coating a coating solution including inorganic fine particles, a water-soluble resin and a boron compound on the surface of the support to form a coated layer; and cross-linking and hardening the coated layer to form a colorant receiving layer; wherein the cross-linking and hardening is performed by applying a solution containing a metal compound and having a pH of 8 or higher to the coated layer or a coated film at a time selected during drying of the coated

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layer formed by coating the coating solution and before the coated layer shows a falling rate of drying (abstract; paragraph 0036)

- {claim 7} wherein an amount of the gas phase method silica is at least 90% by mass with respect to the whole inorganic fine particles, and an amount of the polyvinyl alcohol is at least 90% by mass with respect to the entire water-soluble resin (paragraph 0053)
- {claim 8} wherein a ratio of the gas phase method silica included to the polyvinyl alcohol included is in the range of 1:5:1 to 10:1 (paragraph 0026)
- {claim 10} wherein the boron compound is at least one of borax, boric acid, and boric acid salt (paragraph 0083)
- {claim 11} wherein a pH of the coating solution is 50 or lower, and a pH of the solution containing the metal compound and having a pH of 8 or higher is 9.0 or higher (abstract)

### *Allowable Subject Matter*

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 9 discloses “A method... wherein the boron compound is included in the coating solution at a mass ratio of 0.05 to 0.50 relative to the water-soluble resin,” which was not found, taught, or disclosed in the prior arts.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koike et al (US Pat 6777039) discloses an inkjet recording sheet.


Yamada et al (US PgPub 20030068476) discloses an inkjet recording sheet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Stephen D. Meier  
Primary Examiner